January 1995

Clinical Center News

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Henderson named deputy director for clinical care

Dr. David Henderson, associate CC director for quality assurance and hospital epidemiology since 1988 and acting clinical director since 1990, has been named Clinical Center deputy director for clinical care.

In announcing Dr. Henderson's appointment, Dr. John I. Gallin, CC director, said, "Dr. Henderson's depth of experience and commitment to excellence at the Clinical Center make him an ideal choice for this position."

"I am both pleased and honored to have the opportunity to work with Dr. Gallin, Mr. Jones, CC department heads and staff, and the leadership of the institutes as we all attempt to reshape the CC to meet the needs of our changing culture," Dr. Henderson said. "For the past 15 years I have maintained a strong commitment to the CC. I anticipate redoubling that commitment as I assume this new role."

Dr. Henderson, a cum laude graduate of Hanover College, Hanover, Ind., earned the M.D. degree from the University of Chicago Pritzker School of Medicine. He did postgraduate training in internal medicine and infectious diseases at the Harbor-UCLA Medical Center in Torrance, Calif., and subsequently joined the UCLA School of Medicine faculty as an assistant professor of medicine in 1978.

Dr. Henderson came to the Clinical Center in 1979 when he was named the CC's first hospital epidemiologist. During his first several years here he also worked in the laboratory of Dr. John E. Bennett, head of the clinical mycology section in NIAID's Laboratory of Clinical Investigation.

Dr. Henderson has been elected to several professional societies and organizations and has received numerous honors and awards, including the NIH Director's Award and a special citation from the HHS General Counsel. He has been an

Continued on back page

Dr. David Henderson has been named CC associate director for clinical care. He has served as associate CC director for quality assurance and hospital epidemiology since 1988.

CC town meeting set Jan. 20

Dr. John I. Gallin, CC director, will hold a town meeting for all Clinical Center employees on Friday, Jan. 20, from noon to 1 p.m. in Lipsett Amphitheater.

This will be an opportunity to meet Dr. Gallin, who was named director in May, and hear about his vision for the CC. It will also be an opportunity to meet the two new deputy directors. Walter Jones joined the CC in October as deputy director for operations and management. Dr. David Henderson recently was named deputy director for clinical care.

Discussion will include recent accomplishments of the CC, including the successful review by the Joint Commission on Accreditation of Healthcare Organizations. Initiatives on the agenda are plans for a new hospital and future streamlining measures.

Director looks ahead to new year's programs, plans

by Dr. John I. Gallin
CC director

The Clinical Center is a unique scientific resource. Therapies developed here have had far-reaching impact on the quality of world health for more than 40 years. As the focus and mechanism for clinical research have progressed over the past decades, so have the requirements of a physical plant to house that research. And as scientific inquiry and medical care have evolved, so has the vision of what we need the Clinical Center to provide.

I would like to take this opportunity to share with you details on some of CC programs and plans that will have significant impact on the work we conduct here during the new year and in the years to come.

•**New hospital.** A new 250-bed research hospital to complement the current facility will provide an expanded, efficient framework for the CC mission. HHS, acting on recommendations by the External Advisory Committee, has funded a competition to develop a concept for this facility. Existing and future intramural funds will pay for this $380 million addition.

•**Streamlining.** Consolidations of patient-care units now underway are designed to reduce the number of CC beds over the next few years. This reduction will help alleviate another pressing concern, a shortage of laboratory space. Our plan is to move offices areas that now encroach on lab space in the original CC core. The vacated office space will be converted back to laboratories, contributing to a much-needed NIH Director's reserve. We have also initiated a massive program to provide essential maintenance and repair to the existing facility.

The consolidations will result in another major shift, a cultural one. Institutes will by necessity share space for patient care in what should be a renewed spirit of cooperation and collegiality.

•**Cost containment.** One new policy allows us to structure an accurate, detailed measure of how much it costs for the Clinical Center to support an institute's protocol. That accounting coupled with efforts to plan with the institutes for support needs will enable us to work more efficiently.

•**CC research.** I encourage high-quality research among CC staffers and have instituted new policies to support it, including clearly defined budgets for CC research and rigorous quality review by the intramural Boards of Scientific Counselors.

This has been a tremendous morale booster for the scientists and health-care providers at the Clinical Center. An added incentive is a new policy that earmarks a percentage of money saved through increased efficiency for research activities.

•**Minority patient recruitment.** A program to identify and recruit minority patients now being developed is crucial to achieving diversity in our patient populations.

•**Information systems innovations.** A revitalization of medical information systems opens doors for innovative patient evaluation and consultation. Digitalization of images such as X-rays soon will be accessible at desk-top computers for patient-care providers throughout the Clinical Center. This technology can also extend to remote locations allowing referring physicians to follow patient care.

Tele-medicine supports another innovation, the establishment of regional centers to monitor and assess patients.We are in a unique position to help define the roles of computer technology in clinical research, roles that will strengthen protocol monitoring and the interactions between extramural and intramural research.

A regional linkage will establish a framework not previously possible for clinical trials. It will enhance patient and data monitoring, as well as increase the involvement by referring, primary-care physicians. This direct interaction between the principal investigators and the primary-care physicians will help provide consistency of clinical decisions during trials and improve the quality of clinical research.

•**Clinical research education.** The Clinical Center has another mandate that extends beyond its mission as a research hospital. It is to define what physicians and scientists need to know to conduct safe, effective clinical research and to make that information available to the scientific community.

NIH Director Dr. Harold Varmus has encouraged the development of a major training initiative at the CC, and work on a core curriculum is underway.

It will comprise four modules each containing both didactic lecture and practical experience, such as mock institutional review panels and data safety monitoring boards. We plan to teach the first class later this winter, and the course will be offered to the new group of clinical associates this summer. More than 100 clinical associates come here each year.

This is an exciting time for clinical research as NIH investigators continue their roles as the nation's premier scientists. We are committed to maintaining and expanding the Clinical Center as NIH's most valuable, most efficient scientific resource.

Clinical Center News

Editor: Sara Byars
Clinical Center News, Building 10, Room 1C255, National Institutes of Health, Bethesda, Maryland 20892. (301) 496-2563. Fax: 402-2984. Published monthly by the Office of Clinical Center Communications, Colleen Henrichsen, chief, for CC employees. News, article ideas, calendar events, letters, and photographs are welcome. **Deadline** for submissions is the second Monday of each month.

Clinical Pathology activities

(Left) CC patient Tiffany Cavoretto drew the winning ticket for the quilt handmade by Clinical Pathology staffers to benefit the Friends of the Clinical Center (FOCC). Winner Diane Teichberg, OMS, re-donated the quilt to FOCC. Watch for details on your second chance to win. The first raffle raised $2,533. (Above) Clin path's annual auction raised $1,153 for the Patient Emergency Fund and Children's Inn. Social Work Director Adrienne Farrar (third from left) accepted the donation from auction organizers (from left) Brenda Alkins,Norma Ruschell, Dianne Cohan, Shelia Barrett, and Rita LaPointe.

briefs

'Help somebody' is theme for Jan. 13 program

"Everyone Can Serve; Help Somebody" is the theme for the Jan. 13 commemoration of Dr. Martin Luther King, Jr.. A program is set for 11:30 a.m.-1 p.m. in Masur Auditorium. Juan Williams, author of *Eyes on the Prize: American's Civil Rights Years, 1954-1965,* will speak. He is a former *Washington Post* editorial writer, White House correspondent, commentator on the "MacNeil-Lehrer News Report", and has appeared on "Crossfire."

February classes set

Call the education and training section, Office of Human Resources Management, at 496-1618 for more information on these and other classes:

•Individual Differences in the Work Place, An Introduction to the Myers-Briggs Type Indicator. Feb. 3, 9 a.m.-3:30 p.m., 6100 Executive Blvd.

•Supervisory Discussion Program, Feb. 10, noon-1p.m., 2C310.

Program examines conflict, confrontation

The NIH Employee Assistance Program's video workshop series, "Work, Career, and Personal Growth," features "Dealing with Conflict and Confrontation" Feb. 7, 14, 21, 28, and March 7. "How to Listen Powerfully" follows April 4, 11, 18, and 25. "How to Deal With Difficult People" is set for June 6, 13, 20, and 27.

The series, known as Tuesdays at the Little Theater, features a lunch-time, drop-in format. It's free and open to all employees. Sessions, which feature a video followed by a group discussion, are noon-1 p.m. in the Visitor Information Center's Little Theater. Call 496-3164 for details.

working

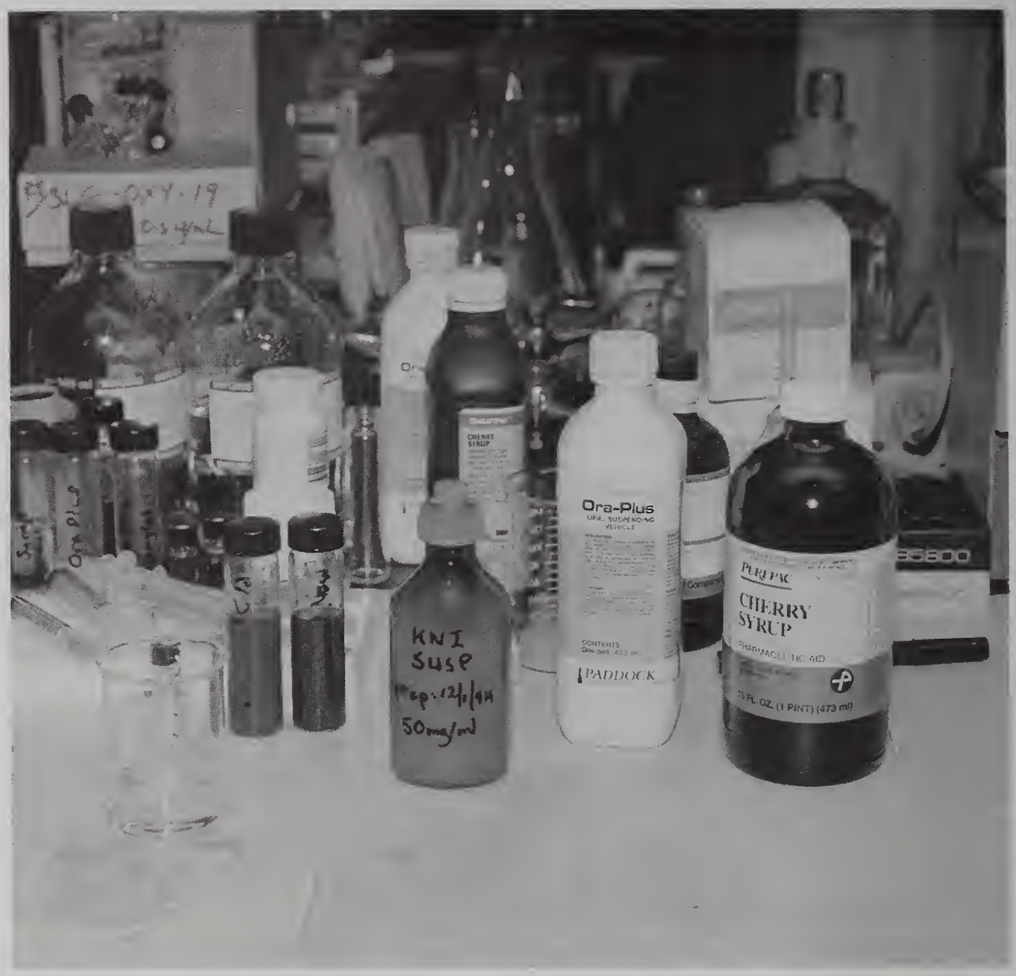
Research by Steve Rafe of Rapport Communications in Virginia has disclosed how audiences react to where a speaker stands when presenting. His findings:

•Audiences respond better to facts presented from their left and anecdotes presented from their right. Why? You engage different parts of their brains.

•When consistently delivering facts from one side and humor from the other, you'll find that audiences laugh more, even at jokes they've heard before.

•Create a distance of 12-15 feet between the right and left zones.

(Reprinted from communications briefings)



Pills and potions: Pharmaceutical service supports CC research

Plastic bags full of pink capsules, resembling Good 'n Plenty candy. Plain bottles of colorless liquid with tumor-zapping potential. Boxes of vials and powders, stacked neatly on shelves. *Drugs*. The stuff we hope will cure what ails us.

To meet the demands of NIH research involving investigational new drugs (INDs), the Clinical Center's pharmaceutical development service (PDS) functions as an on-site drug-manufacturing plant. Says George Grimes, acting chief, "There's nothing like this at any other hospital in the country—not on this scale."

PDS currently handles about 2,000 separate drugs. Of these, one third are formulated here from raw materials obtained from pharmaceutical companies. For example, a barrel of powdered drug is turned into tablets, capsules, or injections, depending on protocol specifications. PDS handles drugs that have not been approved by the Food and Drug Administration (FDA), and drugs that have FDA approval for at least one indication, but are being tested for other uses.

Part of the Pharmacy Department, PDS comprises the product development unit, the analytical and quality control unit, and the clinical pharmacokinetic research laboratory. The largest unit, product development, is responsible for registration, inventory control, and record-keeping of all INDs used at the Clinical Center.

Because FDA requires precise accounting for investigational new drugs, staff must track how every milligram is used. A drug might be given at different doses in several different protocols, or in combination with another drug, or substituted with placebo. Since a placebo must look identical to the study drug, keeping all compounds separate and clearly labeled is crucial to the safety of patients and to the success of a study. Staff are rigorously trained in inventory procedures, which are done in a newly built "quiet room," with no telephones or distractions, so that staff can count in peace. Says Grimes, "We do whatever it takes to keep from making mistakes."

Product-development staff also advise investigators on the best way to assign patients to placebo or drug, and how to "ensure the blind," that is, make sure that neither patient nor investigator knows who is receiving what. If a patient learns inadvertently that he's receiving a placebo, data from that patient can't be used.

Researchers often have little information about the INDs they use. Product-development staff write monographs similar to the detailed package inserts you may have seen in prescription drugs.

"We note any factor that could impede delivery of the correct dose of a drug," says Grimes. "For instance, is it okay to use a different tube or bag or pump to infuse drug X?" One study drug clung to the IV tubes instead of dripping out the ends, he recalls. Instructions on proper tubes were added to the monograph. This information is also given to FDA. In fact, PDS and FDA confer daily on a myriad of legal, technical, and chemical issues.

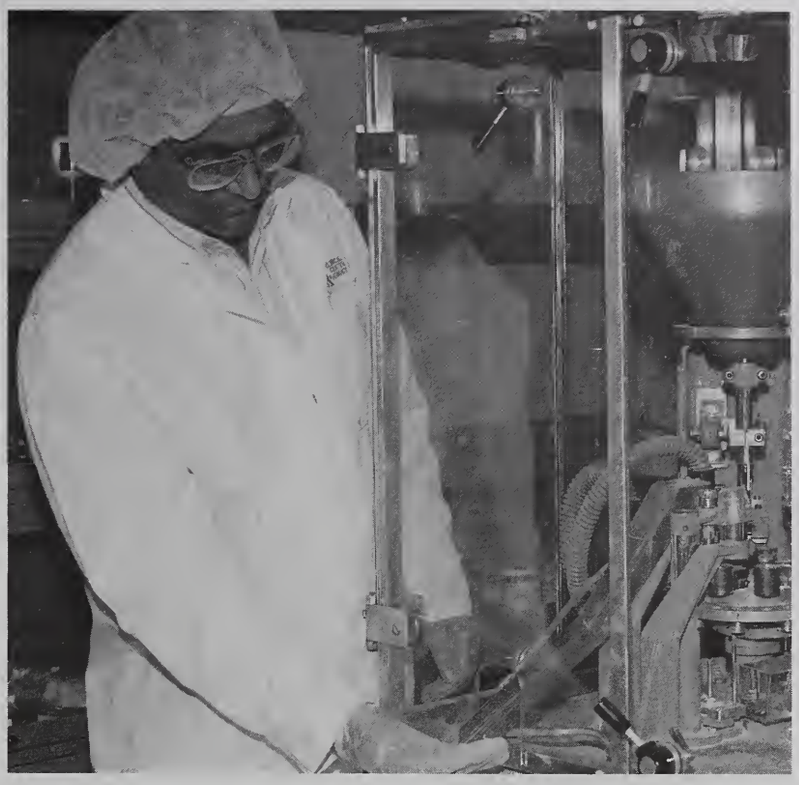
Investigators might need a drug tailored to their unique trial. Product-development staff handle such requests. For example, PDS's Dr. Shanker Gupta is working with NIAID researcher Dr. David Kaslow to formulate a vaccine that might block the transmission of malaria.

The analytical and quality control unit studies INDs to see how long they stay potent—their "shelf life." Also, after a large batch of a drug is made, quality-control staff test individual doses for the correct concentrations of ingredients. Drugs are often mixed with other substances to make them easier to administer. Says Grimes, "One oral drug being studied in children with AIDS was so foul-tasting that the kids wouldn't take it." Staff tested several flavor enhancers before settling on cherry syrup. "The kids still don't like it very much, but at least they'll swallow it," he says. The next step is to ensure that the flavoring doesn't affect the drug's effectiveness or stability.

The clinical pharmacokinetic research laboratory studies the way INDs behave in the body. They determine, for example, how much drug is absorbed, how quickly, and how long it stays in the body. *CCNews* profiled Dr. Steve Piscitelli in June for his research on the pharmacokinetics of interleukin-2.

Investigators can, and often should, consult with PDS while planning their protocol. Early planning is crucial when a protocol requires PDS to make a drug. Before an IND becomes commercially available, supplies can run critically short, requiring fancy footwork by PDS. Grimes recalls an early AZT study: "The drug was so hard to get that we resorted to parceling out a three- or four-day supply of pills and shipping them across the country to keep the patient on medication until our supply arrived," he says. Even when a drug is readily available, planning helps ensure that all supplies will be there when needed.

—by Sue Kendall



PDS chemist Ram Agarwal operates a machine that cranks out one drug capsule per second.

Transfusion medicine specialists honored during annual meeting

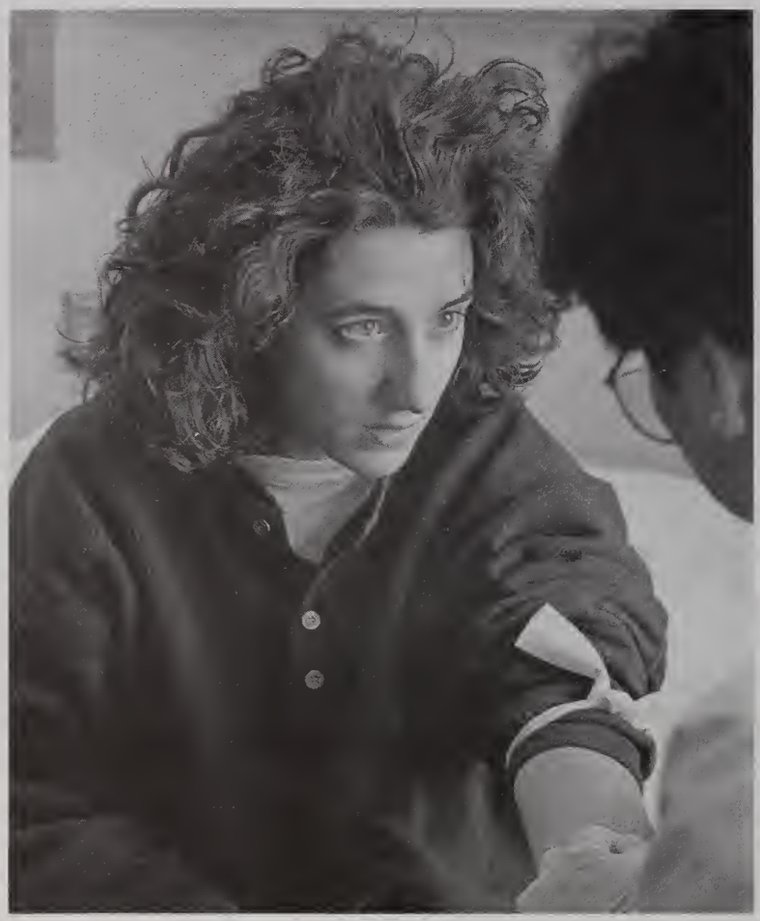
Three transfusion medicine professionals with ties to the CC Department of Transfusion Medicine (DTM) were honored during the American Association of Blood Banks annual meeting last month in San Diego.

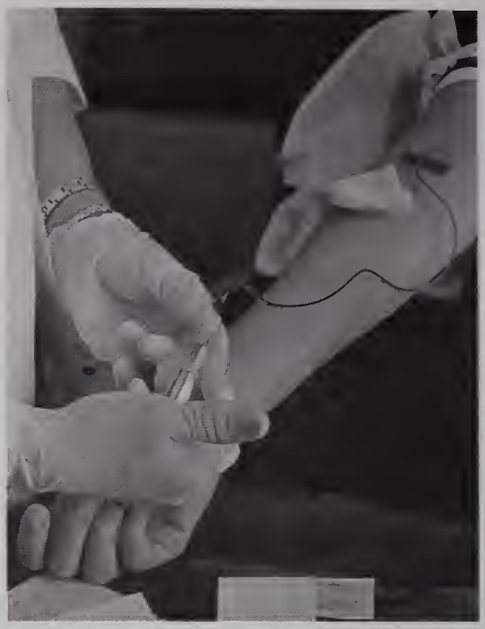
Dr. Jong-Hoon Lee, a visiting fellow, received a scholarship award designed to promote research, development, and continuing education in transfusion medicine. He was selected based in part on his paper entitled, "A Controlled Comparison Study on the Efficacy of Hetastarch and Pentastarch in Collecting Granulocytes Using the Model CS-3000 Plus Blood Cell Separator."

Colleen A. Bowman and Maura A. Fitzgerald, graduates of DTM's specialist in blood banking certificate program, received 1994 AABB-Fenwal Scholarships for Specialists in Blood Banking Students. The awards are intended to encourage educational pursuits in immuno-hematology.

Bowman's essay was entitled "Standardization of Analysis of CD34+ Hematopoietic Progenitor-Stem Cells by Flow Cytometry Cryopreserved Cell Lines." Fitzgerald's essay was "Absorption of Warm Autoantibody Using Formalin-Fixed Platelets."

Both awards are sponsored by AABB's Scientific Section Coordinating Committee and funded by Baxter Healthcare Corporation, Biotech North American, Fenwal Division.





(Left) Jennifer Williamson, who recently earned a B.S. degree in molecular genetics at Ohio State University, participated in a metabolism study. "I wanted to come here to be exposed to career options and different perspectives," she says. (Above) The study required frequent blood draws. (Photos by Sara Byars)

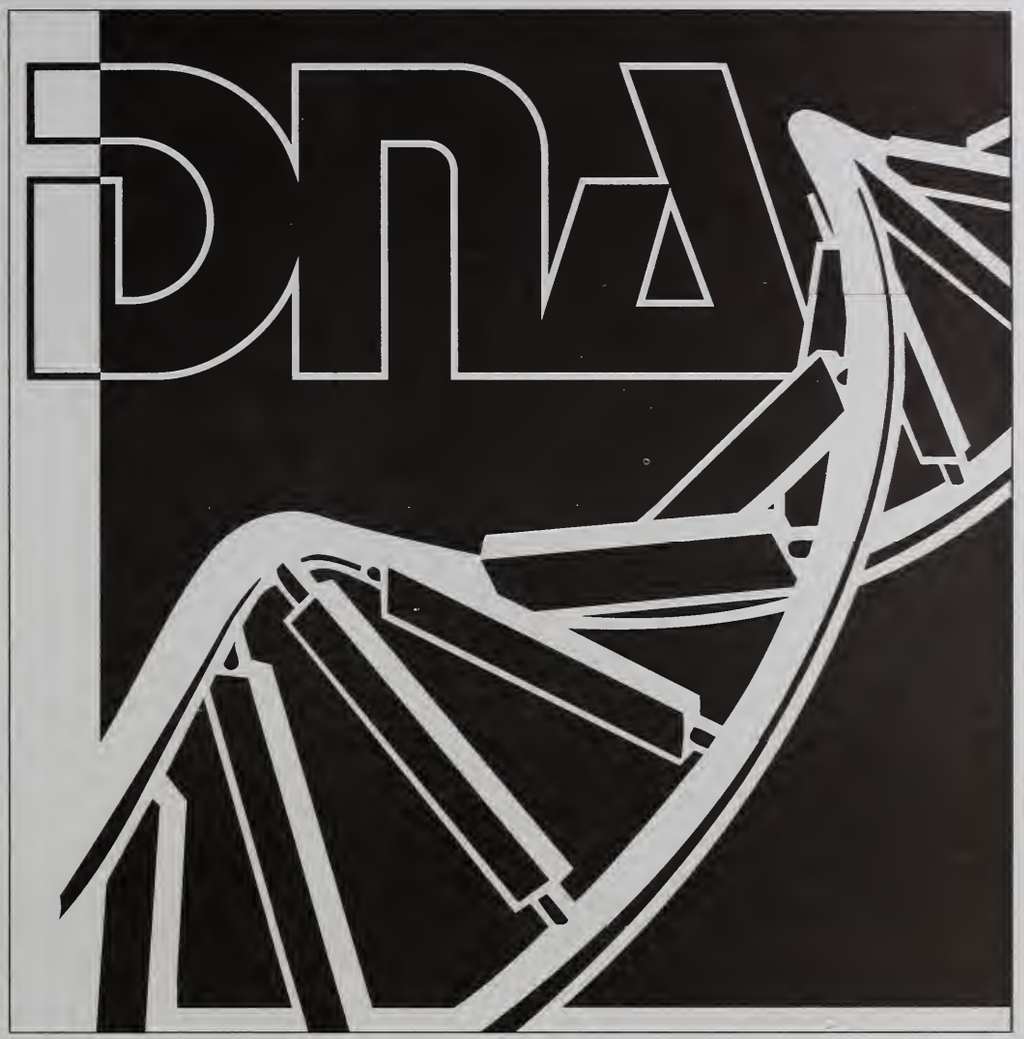
CC program offers student interns unique experiences

They are students, scientists, volunteers. They are the college students from across the country who come to the Clinical Center to participate as normal volunteers in various research protocols and work in labs and other areas in the hospital to gain field experience. "We recruit from many schools," notes Judith Williams, normal volunteer internship program director, "and recently expanded the number of schools we visit to increase diversity among the students who participate."

Participants face a rigorous selection process with the individual schools doing the initial screening. "The students are drawn to NIH because of its reputation. We are looking for healthy, enthusiastic students. Many are pre-med or in science programs." Participants stay at the Clinical Center for the protocol's duration, and receive a stipend. Volunteers deemed 'normal' are crucial to studies. "In order to learn about illness we have to understand health," Williams says.

Williamson watches while 11 East patient Rodricas Ayers plays a video game. While at the CC, Williams worked with recreation therapists assigned to the pediatric unit. "The kids like the idea I'm a patient, too," Williams says.

Workshop examines ethical issues in genetics



Our increasing ability to link genes to diseases raises compelling and complicated ethical issues, concerns examined during the Interdisciplinary Ethics Workshop, NIH's first, sponsored Nov. 30 by the Clinical Center Nursing Department and the Bioethics Program.

"This is an area that is going to change the way that medicine is practiced over the next five or ten years," said conference speaker Dr. Francis Collins, director of the National Center for Human Genome Research, "and many of the studies and debates and deliberations about the appropriate use of this potentially very powerful technology are happening right here at NIH and will involve the Clinical Center."

The definition of genetics in medicine is broadening, he adds. "I think many of you may have trained in an era where genetics was sort of relegated to a particular category of rare diseases. But, in fact, virtually all disease—except perhaps trauma—turns out to have a genetic component."

That's no revelation, he says. "We've known that for a long time by studies of identical twins that have been raised apart. But we haven't been able to do much about it, so it was sort of an observation in search of an application."

The Human Genome Project offers the very real prospect, he continues, of uncovering the genetic component of virtually all diseases in the next 10-15 years.

"We have to figure out how we're going to use that information in ways that benefit people. I think that there will be enormous benefit, but there are also pitfalls, and we have to have our eyes open," he says.

"Again it comes back to [asking] what is the value of having this information. And the value comes down to what options does a person at that high risk have to try to reduce the risk?"

And how should the health-care community approach counseling large groups of individuals determined through genetic testing to be at risk for a disease? It hasn't been attempted on a large scale, Dr. Collins explains. "We do not, at the moment, have the necessary number of health professionals who are trained in genetics to handle that kind of volume. There are only 1,200 genetic counselors in the whole country."

"As science tries to understand and simplify things, it's the role of ethics to help us think about the complexities, to help think about the hundred questions that come with each answer that we get," Dr. Christine Grady, acting chief of clinical therapeutics, NINR, told the group.

Genetic testing and gene therapy raise questions about where the rights of the individual end and where responsibilities to others—like family, offspring, society—might begin, she continued. "Those are questions that may make some of the genetics discussions unique."

And they are essential questions because new knowledge and technology—renewed possibilities—bring with them the need for decisions on how to use the advances. "With that renewed possibility," Dr. Grady says, "we need to make decisions about whether, when, and how to adopt these new possibilities. Every decision that might have any impact on human behavior or human choices, or consequences, should include considerations of the ethical dimensions of the decisions."

The interdisciplinary workshop is planned as an annual event.

—by Sara Byars

. . . Henderson named deputy CC director

Continued from page one

academic councilor to the Society for Healthcare Epidemiology of America. He is a fellow in the American College of Physicians and in the Infectious Diseases Society of America. He is on the editorial board of *Infection Control and Hospital Epidemiology* and serves as the publication's section editor on AIDS.

Dr. Henderson has maintained an active research interest in infectious diseases, concentrating on the risk for occupational infections in health-care workers. He has published more than 70 manuscripts in refereed journals in addition to 24 chapters in medical textbooks. He has been an invited speaker at national and international academic conferences, including the International Conference on AIDS, the Annual Conference of the Infectious Diseases Society of America, the annual meeting of the American Society for Microbiology, and the Interscience Conference on Antimicrobial Agents and Chemotherapy.

Dr. Henderson was one of four physicians selected as an advisor by Admiral James D. Watkins, the chairman of the President's Commission on the Human Immunodeficiency Virus Epidemic, in 1987. He has served as a consultant and the NIH representative to the Centers for Disease Control and Prevention in the development of national guidelines relating to the prevention of transmission of bloodborne and airborne pathogens in health-care settings.

cc factoids

Some 2,500 people attended last fall's six Medicine for the Public Lectures sponsored by CC Communications. This year marked the 18th for the series, which features physicians and scientists working in the frontiers of medical research at NIH. The lectures, complemented by lively graphics, are designed to help people understand the latest developments in medicine.

Most of those attending—75 percent—live in Montgomery County. Another 10 percent traveled from Northern Virginia. Eleven percent work at NIH. About a third of audience members had some high school education. Just over a quarter hold graduate degrees. Most—32 percent—were between 14 and 18 years of age, and 29 percent were aged 46-65. Sixty percent of those coming to the lectures this year judged the lectures' art as excellent. The lectures themselves fared even better. They were declared excellent by 63 percent of the attendees. The majority, 83 percent, liked the lectures saying their content level was just right.

january

4
Grand Rounds
noon-1 p.m.
Lipsett Amphitheater
Severe Mycobacteria Infections: Immune Abnormalities and Treatment, Steve Holland, M.D., NIAID; *Nitric Oxide and Sepsis: Role in Inflammation and Shock,* Robert L. Danner, M.D., CC

4
Wednesday Afternoon Lecture, the NIH Director's R.E. Dyer Lecture
3 p.m.
Masur Auditorium
Macromolecular Associations and Signal Transduction, Henry Metzger, M.D., NIAMS

11
Grand Rounds
noon-1 p.m.
Lipsett Amphitheater
Brittle Bone Disease in Rheumatic Patients: Marrow Stroma as a Potential Cause and Cure, Pamela Robey, Ph.D., NIDR (Benchwork) and Mark Gourley, M.D., NIAMS (Bedside Implementation)

11
Wednesday Afternoon Lecture
3 p.m.
Masur Auditorium
Control of Cell Cycle Progression and Cell Polarity in Yeast, Ira Herskowitz, Ph.D., University of California-San Francisco. Hosted by the Genetics Interest Group

18
Grand Rounds
noon-1 p.m.
Masur Auditorium
Identification of the VHL Gene: Its Role in Renal Carcinoma, Berton Zbar, M.D., and W. Marston Linehan, M.D., NCI (Benchwork and Bedside Implementation)

18
Wednesday Afternoon Lecture, the NIH Director's G. Burroughs Mider Lecture
3 p.m.
Masur Auditorium
Brain Maps for Eye Movements, Robert H. Wurtz, Ph.D., NEI

25
Clinical Staff Conference
noon-1:30 p.m.
Lipsett Amphitheater
Neuroimmune Interactions: Focus on Cytokines and the Brain, Esther M. Sternberg, M.D., NIMH, Moderator

25
Wednesday Afternoon Lecture
3 p.m.
Masur Auditorium
G Proteins and Regulation of Adenylyl Cyclases, Alfred G. Gilman, M.D., Ph.D., University of Texas, Southwestern Medical Center. Hosted by the NIH Postdoctoral Fellows